REMARKS

Applicants request favorable reconsideration and allowance of the subject application in view of the preceding amendments and the following remarks.

Claims 1-6, as amended, remain pending in the application. Claim 1 is independent. Pages 3, 4-6, 8 and 9 in the specification have been amended to obviate the informalities noted by the Examiner, and also to provide an *ipsis verbis* reference for the terms in Claim 1. The formulas on pages 7 and 8 are empirical and are to be understood as having non-dimensional values wherein the values are measured in various non-homogenous measurement systems. Moreover, the units used in the formulas are conventional for the art.

Applicants request favorable reconsideration and withdrawal of the objections and rejections set forth in the outstanding Office Action.

In the Office Action, Claims 1-6 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,830,411 (Tsuru et al.) or U.S. Patent No. 6,581,980 (Delange et al.). Applicants note that the Examiner mistakenly stated that U.S. Patent No. 4,830,411 issued to Black rather than Tsuru et al. The objection and rejections are respectfully traversed in light of the preceding amendments and the following remarks.

Independent Claim 1 is directed to a threaded joint for pipes comprising a pin and a box, each having, at at least one end, a respective threaded portion, in

which the respective threaded portions are coated with a layer of dry lubricant having a thickness of between 5 μm and 30 μm and in which a nominal void volume (NVV) of the space (6, 7) between pin member and box member is sized so that the following formula is satisfied:

$$NVV\left[cm^3\right] \leq 4 \times OD[inch]$$

where OD is the nominal outer diameter of the pipes.

For the following reasons, Applicants submit that Claims 1-6, as amended, manifestly are not anticipated by Tsuru et al. or Delange et al.

Tsuru et al. is directed to a threaded joint for oil-well pipes. The threaded joint comprises a box having an internal thread, a pin having an external thread, a metal-to-metal sealing contact provided at the unthreaded tips of the box and the pin. Additionally, a film of *grease* is applied on the surface of the internal and external threads.

Contrary to the Examiner's assertion, Tsuru et al. is not understood to teach or suggest at least threaded portions coated with a dry lubricant. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. § 102(b).

Delange et al. is directed to a threaded connection with high compressive rating. The connection 30 includes a box section 31 and a pin section 32. Two-step thread segments 33 and 34 are provided on either side of a torque shoulder

35. The torque shoulder 35 is a reverse angle shoulder, and the threads 33 and 34 are a hooked load flank configuration.

Contrary to the Examiner's assertion, Delange et al. is not understood to teach or suggest at least threaded portions coated with a dry lubricant. Moreover, Delange et al. is not read to teach or suggest a NVV that satisfies the formula recited in Applicants' independent Claim 1 because insufficient data are provided in Delange et al. to make such a calculation. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. § 102(b).

Applicants, therefore, respectfully submit that the present invention, as defined in independent Claim 1, is patentable over the cited art whether alone or combined. In addition, dependent Claims 2-6 set forth additional features of Applicants' invention. For example, Claim 2 sets forth that the nominal void volume NVV of the space (6, 7) is sized so that the following formula is satisfied:

$$\frac{NVV\ [cm^3]}{OD\ [inch] \times \sqrt{Wt\ [mm]}} \leq 1$$

where Wt is the thickness of the wall of the pipes. Claim 3 sets forth that the area g_T of a free space (5, 6) between the threads engaged in the section of the joint considered on an axial plane is less than 0.4 mm²/pitch. Also, Claim 4 sets for that each of the male and female elements is provided with at least one seal

element and Claim 5 sets forth that the pin has two outer threaded portions (12, 13) having a frusto-conical shape, which are axially staggered and separated by a shoulder (9'), and the box has two inner threaded portions (10, 11) having a frusto-conical shape, which are axially staggered and separated by a shoulder (9'), which acts as a detent during making up. Finally, Claim 6 sets forth that the pin has an outer threaded portion of frusto-conical shape and the box has an inner threaded portion having a frusto-conical shape, and each of the pin and box member is provided with a shoulder set at at least one respective end of the threaded portions, adapted to act as abutment during making up. Applicants submit that these claims are patentable in their own right and respectfully request independent consideration of the dependent claims.

Applicants submit that the instant application is in condition for allowance, and an early Notice of Allowance are respectfully requested.

Applicants' undersigned attorney may be reached in our Washington, DC office by telephone at 202- 530-1010. All correspondence should be directed to our below-listed address. Any fee required to render this response timely may be charged to Deposit Acct. No. 06-1205.

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